Washington State
House of Representatives
Office of Program Research

BILL ANALYSIS

Health Care Committee

HB 1461

Brief Description: Regulating stem cell research and human cloning.

Sponsors: Representatives Schual-Berke, Sullivan, Morris, Ruderman, Kessler and Cody.

Brief Summary of Bill

- Expresses that it is state policy to permit research using human embryonic stem cells, human embryonic germ cells, and human adult stem cells.
- Requires health care providers to inform fertility treatment patients of their options regarding the disposal of unused embryos. Requires patients to provide written consent before donating unused embryos for research.
- Permits the donation of human embryonic tissue or human cadaveric fetal tissue for research, and contains criminal provisions for the sale of any such tissue.
- Prohibits cloning or attempting to clone a human being.

Hearing Date: 2/5/03

Staff: Chris Blake (786-7392).

Background:

The Biology of Stem Cells

Stem cells can be distinguished from other types of cells in three ways. First, they are capable of dividing and replicating (renewing) themselves indefinitely. Second, stem cells are unspecialized. This means that they do not perform any specific function, as do heart muscle cells, red blood cells, or nerve cells. Lastly, stem cells can create specialized cells. While they do not perform a particular function, they can give rise to specialized cells while remaining unspecialized themselves.

Stem cells can be classified as embryonic stem cells, embryonic germ cells, and adult stem cells according to the stage of development of the organism. The key difference between embryonic stem cells and adult stem cells is that an embryonic stem cell can become any type of cell in the body, while adult stem cells can only vary between the different types of

cells within the organ in which they are found. Another significant difference is that embryonic stem cell replication can generate large numbers of new cells, while adult stem cells do not replicate as easily (under current technology).

Scientists obtain human embryonic stem cells from embryos that are not used after in vitro fertilization treatment. In 1998 scientists first isolated and cultured human embryonic stem cells, a process that destroys the embryo. Current research using stem cells pertains to diabetes, Parkinson's disease, heart disease, cancer, and spinal cord injury.

Cloning

Cloning is the process where scientists make a genetic copy of another animal by asexual reproduction. By transplanting the nucleus from a specialized cell into an unfertilized egg that has had its nucleus removed, a genetically identical animal is made. Sheep, mice, goats, pigs, and cows have all been cloned. The determination of whether or not one animal is a clone of another is made by comparing the DNA of both creatures.

Federal and State Policy on Stem Cells

In August 2001, the President announced that federal funding of embryonic stem cell research would be permitted for research on the embryonic stem cell lines in existence at that time, but the funding would not be available for any subsequently created embryonic stem cell lines. The limitation does not apply to privately funded research. At the same time, the President announced the creation of the President's Council on Bioethics to study the ethical and moral implications of developments in biomedical and behavioral science and technology.

Recently, California declared its policy to permit research regarding human embryonic stem cells, human embryonic germ cells, and human adult stem cells.

Summary of Bill:

The policy of Washington State is stated to be that research involving the use of human embryonic stem cells, human embryonic germ cells, and human adult stem cells is permitted upon full consideration of the ethical and medical implications.

Health care providers that deliver fertility treatment to patients must provide them with adequate information to make an informed choice regarding the disposition of unused human embryos after treatment. Patients must be presented with four options for disposing of unused embryos including storing them, destroying them, donating them to another person, or donating them for research. Before donating the unused embryos for research, the patient must provide written consent.

The donation of human embryonic tissue or human cadaveric fetal tissue for research purposes is permitted. The sale of such tissues is a felony. Reasonable payments to cover certain expenses are allowed.

Cloning or attempting to clone a human being is prohibited and carries a civil penalty of $100,000 for each violation.

Appropriation: None.

Fiscal Note: Not Requested.

Effective Date: The bill takes effect ninety days after adjournment of session in which bill is passed.